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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of

Docket No.: P26871

W. BLACKWELL, *et al.*

Confirmation No.: 9978

Serial No.: 10/602,711

Group Art Unit: No. 3652

Filed: June 25, 2003

Examiner: G. W. Adams

For: **METHOD AND APPARATUS TO EFFECTUATE AUTOMATED POSITIONING  
AND LOADING OF VARIABLE SIZED CONTAINERS**

**APPEAL BRIEF UNDER 37 C.F.R. § 41.37**

Commissioner for Patents  
U.S. Patent and Trademark Office  
Customer Window, Mail Stop Appeal Brief-Patents  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314  
Sir:

This appeal is from the Examiner's final rejection of claims 1-26 as set forth in the Final Office Action of August 16, 2005. A Notice of Appeal and a Request For Pre-Appeal Brief Review, in response to the August 16, 2005 Final Office Action, was filed on December 16, 2005.

A check in the amount of \$ 500.00 is being concurrently submitted as payment of the requisite fee under 37 C.F.R. 41.20(b)(2). No additional fee is believed to be required for filing the instant Appeal Brief. However, if for any reason a necessary fee is required for consideration of the instant paper, authorization is hereby given to

charge the fee for the Appeal Brief and any necessary extension of time fees to Deposit Account No. 19-0089.

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**(I) REAL PARTY IN INTEREST**

The real party in interest is Lockheed Martin Corporation by an assignment recorded in the U.S. Patent and Trademark Office on June 25, 2003, at Reel 014229 and Frame 0358.

**(II) RELATED APPEALS AND INTERFERENCES**

No related appeals and/or interferences are pending.

**(III) STATUS OF THE CLAIMS**

Claims 1-26 stand finally rejected. Claims 1-26 are pending and are part of this appeal. The claims in issue are attached in the "Claims Appendix".

**(IV) STATUS OF THE AMENDMENTS**

A Response under 37 C.F.R. § 1.116 was filed October 7, 2005, requesting reconsideration of the finally rejected claims. The Examiner responded with an Advisory Action mailed November 4, 2005, indicating that the Response was considered, but did not place the application in condition for allowance. Appellants submit that no other amendments after final have been filed; however, all amendments to the claims have been entered.

**(V) SUMMARY OF THE CLAIMED SUBJECT MATTER**

**A. The Claimed Subject Matter**

**1. INDEPENDENT CLAIM 1**

With reference to paragraphs [0025] – [0039] of the instant published application 2004/0265101 and to the figures, and by way of non-limiting example, the invention

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provides for an apparatus (100) for loading mail objects, comprising a bucket assembly (110) which holds a container (see Fig. 7), an actuator system (400) moving the bucket assembly (110) between at least an upright position (see Fig. 4), an intermediate tilt position (see Fig. 5) and a full tilt position (see Fig. 6), at least one sensor (120C) which detects whether the bucket assembly has reached a fill capacity at each of the upright position, the intermediate tilt position and the full tilt position (see paragraph [0027]), and a feedback control system (e.g., sensors 120A-120C and control system C) which controls an indexing of the bucket assembly (110) (see paragraph [0026]), via the actuator system (400), between the upright position (Fig. 4), the intermediate tilt position (Fig. 5) and the full tilt position (Fig. 6), wherein in the intermediate position (Fig. 5), packages or other mail objects are permitted to settle within the bucket assembly (110) such that additional packages or other mail objects can be introduced into the bucket assembly (110) in the intermediate position (see Fig. 5 and paragraph [0034]).

## **2. INDEPENDENT CLAIM 17**

With reference to paragraphs [0025] – [0039] of the instant published application 2004/0265101 and to the figures, and by way of non-limiting example, the invention provides for a loading system, comprising a transporting and sorting system (T), including an induction mechanism that introduces packages onto a transporting system which transports the packages from the induction mechanism to a plurality of drop off positions (see paragraph [0033]), a chute (CH) associated with each of the plurality of drop off positions, and a loading apparatus (100), comprising a bucket assembly (110) which holds a container (see Fig. 7), an actuator system (400) moving the bucket

assembly (110) between at least an upright position (see Fig. 4), an intermediate tilt position (see Fig. 5) and another tilt position (see Fig. 6), at least one sensor (120C) which detects whether the bucket assembly (110) has reached a fill capacity (see paragraph [0027]) at each of the upright position (Fig. 4), the intermediate tilt position (Fig. 5) and the another tilt position (Fig. 6), and a feedback control system (e.g., sensors 120A-120C and control system C) which controls an indexing of the bucket assembly (110), via the actuator system (400), between the upright position (Fig. 4), the intermediate tilt position (Fig. 5) and the another tilt position (Fig. 6).

### **3. INDEPENDENT CLAIM 21**

With reference to paragraphs [0037] – [0039] of the instant published application 2004/0265101 and to the figures, and by way of non-limiting example, the invention provides for a method for loading packages, comprising the steps of placing a container in a first tilt position (see Fig. 7), detecting when the container is full (step 812 via sensor 120C) at the first tilt position (see paragraph [0038]), indexing the container to an intermediate tilt position to enable settling of contents within the container (see paragraph [0038]), detecting when the container is full at the intermediate tilt position (step 818), and indexing the container to an upright position (steps 814 and/or 820).

### **4. INDEPENDENT CLAIM 25**

With reference to paragraphs [0025] – [0039] of the instant published application 2004/0265101 and to the figures, and by way of non-limiting example, the invention provides for a control system for loading packages, comprising a module (e.g., sensor 120C) which detects when a container is full (see paragraph [0027]) at a first tilt position

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(Fig. 4), an intermediate tilt position (Fig. 5) and an upright position (Fig. 6), a module (e.g., sensor 120D) which detects a position of the container (see Figs. 4-7), and a module (e.g., sensors 120C, 120D, actuator system 400, and control C) which controls a movement of the container based at least on a capacity of the container (see paragraphs [0026] – [0028], [0034] and [0036] – [0039]).

#### **(VI) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

**Whether claims 1, 17, 21, 25 and 26 are improperly rejected under 35 U.S.C. § 112, 2<sup>nd</sup> Paragraph as being indefinite.**

**Whether claims 25 and 26 are improperly rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,865,590 issued to LILLEY.**

**Whether claims 1-24 are improperly rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,865,590 issued to LILLEY in view of U.S. Patent No. 4,534,156 issued to SMITH.**

#### **(VII) ARGUMENT RE. 112, 2<sup>nd</sup> PARAGRAPH, REJECTION**

**REJECTION OF INDEPENDENT CLAIM 1 UNDER 35 U.S.C. § 112, 2<sup>ND</sup> PARAGRAPH IS IN ERROR**

The rejection of claim 1 under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph, as being indefinite is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

The Examiner asserts that claim 1 is indefinite because it is not clear

“whether application is claiming a sensor which

detects the amount of contents within a container or whether application is claiming a sensor which detects the position of a container based on whether the capacity of contents within a container."

Appellants respectfully disagree and submit that claim 1 in fact clearly recites the type of sensor disclosed in the instant application and that one having ordinary skill in the art would understand the claimed invention.

Claim 1 recites "at least one sensor which detects whether the bucket assembly has reached a fill capacity at each of" the three recited positions. It would be obvious to one of skill in the art that the at least one sensor detects the amount of content in the container at each of the three recited positions. That is, it is clear from the language of claim 1 that the at least one sensor detects a fill capacity of the container. From a fair reading of this claim, the fill capacity can be detected at three positions: an upright position, an intermediate tilt position and another tile position.

At least one sensor which performs this function is clearly shown in Fig. 1 as, e.g., reference number 120C. As the Examiner will note, this sensor 120C is arranged on the bucket assembly 110. Moreover, paragraph [0027] of the instant published application No. 2004/0265101 clearly describes sensor 120C as fill capacity sensor for a bucket assembly or a container arranged within the bucket assembly and that fill capacity can be detected at the upright position and the various tilt positions. Also, as discussed in paragraph [0027], as an example, the sensor can be unblocked in order to determine whether there is additional space in the container. Appellants submit that one having ordinary skill in the art, having read the specification and figures, would thus

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have no difficulty understanding the invention. Nor has the Examiner demonstrated otherwise.

Because each of the features recited in claim 1 would be understood by one having ordinary skill in the art, Appellants submit that each of the features in claim 1 are clear and are not indefinite.

**REJECTION OF INDEPENDENT CLAIM 17 UNDER 35 U.S.C. § 112, 2<sup>ND</sup> PARAGRAPH IS IN ERROR**

The rejection of claim 17 under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph, as being indefinite is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

The Examiner asserts that claim 17 is indefinite because it is not clear

“whether application is claiming a sensor which detects the amount of contents within a container or whether application is claiming a sensor which detects the position of a container based on whether the capacity of contents within a container.”

As claim 17 recites similar features asserted to be indefinite, Appellants incorporate by reference the arguments made above with regard to the indefiniteness rejection of claim 1. That is, it is clear from the language of claim 17 that the at least one sensor detects a fill capacity of the container. From a fair reading of this claim, the fill capacity can be detected at three positions: an upright position, an intermediate tilt position and another tile position.

Because each of the features recited in claim 17 would be understood by one



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having ordinary skill in the art, Appellants submit that each of the features in claim 17 are clear and are not indefinite.

**REJECTION OF INDEPENDENT CLAIM 21 UNDER 35 U.S.C. § 112, 2<sup>ND</sup> PARAGRAPH IS IN ERROR**

The rejection of claim 21 under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph, as being indefinite is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Similar to the above, the Examiner asserts that claim 21 is indefinite because it is not clear

“whether application is claiming a sensor which detects the amount of contents within a container or whether application is claiming a sensor which detects the position of a container based on whether the capacity of contents within a container.”

Appellants respectfully disagree.

Claim 21 recites the detecting of when a container is full in both a first tilt position and an intermediate position. This claim does not even recite a sensor. As such, the rejection is faulty on its face. In any event, the claim is clear and definite in that the method detects the capacity of the container. This can be done at a first tilt position or an intermediate position.

As explained above, this can be accomplished using sensor 120C which participates in this function, as clearly shown in Fig. 1. As the Examiner will note, this sensor 120C is arranged on the bucket assembly 110. As explained above, paragraph

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[0027] of the instant published application No. 2004/0265101 clearly describes sensor 120C as fill capacity sensor for a bucket assembly or a container arranged within the bucket assembly and that fill capacity can be detected at the upright position and the various tilt positions. Appellants submit that one having ordinary skill in the art, having read the specification and figures, would have no difficulty understanding the invention. Nor has the Examiner demonstrated otherwise.

Because each of the features recited in claim 21 would be understood by one having ordinary skill in the art, Appellants submit that each of the features in claim 21 are clear and are not indefinite.

**REJECTION OF INDEPENDENT CLAIM 25 UNDER 35 U.S.C. § 112, 2<sup>ND</sup> PARAGRAPH IS IN ERROR**

The rejection of claim 25 under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph, as being indefinite is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Using the same argument, the Examiner asserts that claim 25 is indefinite because it is not clear

“whether application is claiming a sensor which detects the amount of contents within a container or whether application is claiming a sensor which detects the position of a container based on whether the capacity of contents within a container.”

Appellants respectfully disagree.

Claim 25 recites modules for detecting when a container is full in each of the

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recited positions and for detecting a position of the container. It is clear from this language that the sensor detects a fill capacity of the container, regardless of the position. Also, in this claim, there is a module which detects the position of the container.

As explained above, the sensor participating in the fill capacity function is clearly shown in Fig. 1 as, e.g., reference number 120C and the position sensors are clearly shown in Fig. 1 as, e.g., reference numbers 120D and 120E. As explained above, paragraph [0027] of the instant published application No. 2004/0265101 clearly describes sensor 120C as fill capacity sensor for a bucket assembly or a container arranged within the bucket assembly and that fill capacity can be detected at the upright position and the various tilt positions.

Furthermore, paragraph [0028] of the instant published application No. 2004/0265101 clearly explains that at least sensor 120D is used to detect the positions of the bucket assembly 110 or container. Appellants submit that one having ordinary skill in the art, having read the specification and figures, would have no difficulty understanding the invention. Nor has the Examiner demonstrated otherwise.

Because each of the features recited in claim 25 would be understood by one having ordinary skill in the art, Appellants submit that each of the features in claim 25 are clear and are not indefinite.

**REJECTION OF DEPENDENT CLAIM 26 UNDER 35 U.S.C. § 112, 2<sup>ND</sup> PARAGRAPH IS IN ERROR**

The rejection of claim 26 under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph, as being

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indefinite is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

The Examiner asserts that claim 26 is indefinite because it is not clear what type of sensor is being claimed. Appellants respectfully disagree.

Claim 26 recites that the controlling module is a positional sensor. As explained above, paragraph [0028] of the instant published application No. 2004/0265101 clearly explains that at least positional sensor 120D is used to detect the positions of the bucket assembly 110 or container in order to allow for controlled movements of the bucket assembly 110 (see also paragraphs [0038] – [0039]). Appellants submit that one having ordinary skill in the art, having read the specification and figures, would have no difficulty understanding the invention. Nor has the Examiner demonstrated otherwise.

#### **(VIII) ARGUMENT RE. 102(b) REJECTION**

##### **REJECTION OF INDEPENDENT CLAIM 25 UNDER 35 U.S.C. § 102 IS IN ERROR**

The rejection of claim 25 under 35 U.S.C. § 102(b) as being anticipated by US Patent No. 5,865,590 to LILLEY is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Independent claim 25 recites, *inter alia*, a module which

... detects when a container is full at a first tilt position, an intermediate tilt position and an upright position, a module which detects a position of the container, and a module which controls a movement of the container based at least on a capacity of the container.

LILLEY does not disclose any of these features.

LILLEY teaches a material handler which has a container 3 that can be moved between three distinct positions (see col. 3, lines 19-22) and discloses the use of sensors 28 and 29 (see col. 3, lines 63-65). However, LILLEY clearly does not disclose a module which detects when a container is full at a first tilt position, an intermediate tilt position and an upright position. Furthermore, the Examiner has essentially acknowledged in the instant Office Action that LILLEY fails to disclose the features of claim 25. For example, in discussing the obviousness rejection on pages 3-5 of the Final Office Action, the Examiner acknowledges that LILLEY does not disclose a sensor that senses a fill capacity. On the other hand, claim 25 clearly recites a module which detects when a container is full at a first tilt position, an intermediate tilt position and an upright position. Accordingly, by the Examiner's own admission, this rejection is entirely improper.

Still further, while the Examiner explains that the control unit 12 in LILLEY constitutes each of the recited modules, completely missing from such assertions is the identification of any language in LILLEY which discloses or suggests a module which detects when a container is full at a first tilt position, an intermediate tilt position and an upright position, and/or a module which detects a position of the container, and/or a module which controls a movement of the container based at least on a capacity of the container..

Nor has the Examiner explained how the sensors 28 and 29 in LILLEY are

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capable of functioning as any of the recited modules, especially since these sensors are disclosed as merely functioning to disable “power to the system when an operator or equipment are in the area of the loading end of the container.” See col. 3, lines 63-65. Thus, LILLEY simply fails to disclose a module which detects a position of the container. Again, a sensor “for disabling power to the system when an operator or equipment are in the area of the loading end of the container” is entirely different from a module which controls a movement of the container based at least on a capacity of the container.

Finally, it is clear that LILLEY fails to disclose a module which controls a movement of the container based at least on a capacity of the container. Clearly, the disclosed sensors do not control the movement of the container based at least on a capacity of the container. The Examiner has simply failed to identify any language in LILLEY which discloses or suggests anyone of more of these features.

Because the above-noted document fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellants submit that no proper reading of LILLEY renders unpatentable the combination of features recited in at least independent claim 25.

**REJECTION OF DEPENDENT CLAIM 26 UNDER 35 U.S.C. § 102 IS IN ERROR**

The rejection of claim 26 under 35 U.S.C. § 102(b) as being anticipated by US Patent No. 5,865,590 to LILLEY is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Dependent claim 26 recites that the controlling module is a positional sensor.

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LILLEY fails to disclose a module which controls a movement of the container based at least on a capacity of the container. As explained above, the disclosed sensors 28 and 29 in LILLEY are disclosed as merely functioning to disable “power to the system when an operator or equipment are in the area of the loading end of the container.” See col. 3, lines 63-65. There is simply no language in LILLEY explaining that these sensors can control the movement of the container based at least on a capacity of the container. The Examiner has simply failed to identify any language in LILLEY which discloses or suggests anyone of more of these features.

Because the above-noted document fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellants submit that no proper reading of LILLEY renders unpatentable the combination of features recited in at least dependent claim 26.

#### **(IX) ARGUMENT RE. 103(a) REJECTION**

##### **REJECTION OF INDEPENDENT CLAIM 1 UNDER 35 U.S.C. § 103 IS IN ERROR**

The rejection of claim 1 under 35 U.S.C. § 103(a) as being unpatentable over LILLEY in view of US Patent No. 4,534,156 to SMITH is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

In rejecting claim 1, the Examiner acknowledges that LILLEY does not teach “a fill sensor to detect fill capacity”, but asserts that this is disclosed at col. 3, lines 35-38 and 52-56 of SMITH. Appellants respectfully disagree.

SMITH relates to an apparatus for filling storage boxes with lemons (see col. 1, lines 5-7), and not to an apparatus for loading mail objects. While it is apparent that SMITH discloses the use of a sensor to detect when a bin is filled, it is clear that the disclosed sensor does not detect whether a bucket assembly has reached a fill capacity, much less, at each of the upright position, the intermediate tilt position and the full tilt position. Instead, the sensor 40 "responds when the bin 28 is filled to a level which will completely fill one box." See col. 3, lines 52-54. It is also clear that the disclosed sensor 40 does not detect when the container is full at the first tilt position, much less, when the container is full at the intermediate tilt position.

The Examiner is respectfully directed to col. 3, lines 52-68 of SMITH, which discloses the following:

In the apparatus 10 of the present invention, the photocell device 40 responds when the bin 28 is filled to a level which will completely fill one box. The filling of the bin to such level is indicated by the presence of one or more articles in the path of beam 42, for example, at the level of the top opening 26, whereupon the motor of the belt driving system 16 is de-energized to prevent overfilling. By this arrangement, the belt 14 carries articles toward the diverter bar 22 and the bin 28 only when there is room in the bin for more articles, and not when it is filled.

When the bin 26 is filled, the photocell device 40 actuates the solenoid valve 37, which in turn initiates the action of the pneumatic cylinder 32 to lower the chute 30 to its FIG. 4 position, whereupon articles flow out of the bottom opening 34 of the bin 28, through the chute 30 and into the box 36.



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It is clear from such language that the sensor is used merely to indicate when the bin 26 is filled in order to ensure that the box is filled. Such language is hardly suggestive of detecting whether the bucket assembly has reached a fill capacity at each of the upright position, the intermediate tilt position and the full tilt position, or of a feedback control system which controls an indexing of the bucket assembly, via the actuator system, between the upright position, the intermediate tilt position and the full tilt position, or of detecting when the container is full at the first tilt position, much less, when the container is full at the intermediate tilt position. Thus, SMITH simply does not compensate for or cure these deficiencies of LILLEY.

Nor has the Examiner adequately explained why one having ordinary skill in the art would be motivated to combine the teachings of these documents. As explained above, the sensors in LILLEY are utilized "for disabling power to the system when an operator or equipment are in the area of the loading end of the container". On the other hand, the sensors in SMITH are utilized to detect when a bin is filled. As these sensors perform entirely unrelated functions, there is no apparent basis for substituting the sensors of LILLEY for those of SMITH. Also, the LILLEY and SMITH references are of such divergent arts, one of skill in the art would not be motivated to combine these references. Additionally, neither of these references provides any suggestion that it would be proper to combine these references in order to achieve the claimed invention.

Finally, even assuming such a substitution were possible, such a substitution would simply not result in a sensor which detects whether a bucket assembly has

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reached a fill capacity, much less, at each of the upright position, the intermediate tilt position and the full tilt position.

Because the combination of the above-noted documents fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellants submit that no proper combination of these documents renders unpatentable the combination of features recited in at least independent claim 1.

**REJECTION OF INDEPENDENT CLAIM 17 UNDER 35 U.S.C. § 103 IS IN ERROR**

The rejection of claim 17 under 35 U.S.C. § 103(a) as being unpatentable over LILLEY in view of SMITH is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

In rejecting claim 17, the Examiner acknowledges that LILLEY does not teach “a sensor to sense fill”, but asserts that this is disclosed at col. 3, lines 35-38 and 52-56 of SMITH. Appellants respectfully disagree.

There is simply no language whatsoever in either LILLEY and SMITH which even remotely discloses or suggests at least one sensor which detects whether the bucket assembly has reached a fill capacity at each of the upright position, the intermediate tilt position and the full tilt position. Additionally, there is simply no language whatsoever in either LILLEY or SMITH which even remotely discloses or suggests a feedback control system which controls an indexing of the bucket assembly, via the actuator system, between the upright position, the intermediate tilt position and the full tilt position. Finally, there is no language whatsoever in either LILLEY and SMITH which discloses or suggests detecting when the container is full at the first tilt position, indexing the

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container to an intermediate tilt position to enable settling of contents within the container and detecting when the container is full at the intermediate tilt position.

As explained above, LILLEY merely discloses sensors which function to disable “power to the system when an operator or equipment are in the area of the loading end of the container.” See col. 3, lines 63-65.

Appellants also disagree with the Examiner’s assertions that LILLEY discloses a feedback control system which controls an indexing of the bucket assembly, via the actuator system, between the upright position, the intermediate tilt position and the full tilt position. The Examiner has failed to identify any language in LILLEY which even remotely discloses or suggests this feature. Moreover, Appellants submit that the above-noted sensors of LILLEY simply cannot and do not perform such a feedback control function. Finally, It is clear from the above-noted quoted language at col. 5, lines 20-35 of LILLEY that the movements of the container are controlled strictly by an operator and is completely under the control thereof. Such language is hardly suggestive of a feedback control system which controls an indexing of the bucket assembly, via the actuator system, between the upright position, the intermediate tilt position and the full tilt position.

Also, Appellants emphasize that while LILLEY discloses the use of sensors 28 and 29 to disable the system (see col. 3, lines 63-65), it is clear that such sensors do not and cannot detect when the container is full at the first tilt position, much less, when the container is full at the intermediate tilt position.

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SMITH, as explained above, merely discloses the use of a sensor to detect when a bin is filled. The sensor 40 in SMITH merely “responds when the bin 28 is filled to a level which will completely fill one box.” See col. 3, lines 52-54. The disclosed sensor 40 simply does not, among other things, detect when the bucket assembly has reached a fill capacity at each of the upright position, the intermediate tilt position and the full tilt position.

Appellants further submit that there is no apparent basis or motivation to combine the teachings of these documents, at least for the reasons indicated above with regard to claim 1.

Because the combination of the above-noted documents fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellants submit that no proper combination of these documents renders unpatentable the combination of features recited in at least independent claim 17.

**REJECTIONS OF INDEPENDENT CLAIM 21 UNDER 35 U.S.C. § 103 IS IN ERROR**

The rejection of claim 21 under 35 U.S.C. § 103(a) as being unpatentable over LILLEY in view of SMITH is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

In rejecting claim 21, the Examiner acknowledges that LILLEY does not teach “detecting when a bucket assembly is full”, but asserts that this is disclosed at col. 3, lines 35-38 of SMITH.

Appellants respectfully disagree. Independent claim 21 recites, *inter alia*,  
detecting when the container is full at the first tilt position;

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indexing the container to an intermediate tilt position to enable settling of contents within the container;  
detecting when the container is full at the intermediate tilt position.

There is simply no language whatsoever in either LILLEY and SMITH which even remotely discloses or suggests any of these features.

Again, LILLEY merely discloses the use of sensors 28 and 29 to disable the system (see col. 3, lines 63-65). Such sensors do not and cannot detect when the container is full at the first tilt position, much less, when the container is full at the intermediate tilt position.

SMITH, as explained above, merely discloses the use of a sensor to detect when a bin is filled. The sensor 40 in SMITH merely “responds when the bin 28 is filled to a level which will completely fill one box.” See col. 3, lines 52-54. The disclosed sensor 40 simply does not, among other things, detect when the container is full at the first tilt position and/or detect when the container is full at the intermediate tilt position.

Appellants further submit that there is no apparent basis or motivation to combine the teachings of these documents, at least for the reasons indicated above with regard to claim 1.

Because the combination of the above-noted documents fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellants submit that no proper combination of these documents renders unpatentable the combination of features recited in at least independent claim 21.

**REJECTION OF DEPENDENT CLAIM 2 UNDER 35 U.S.C. § 103 IS IN ERROR**

The rejection of claim 2 under 35 U.S.C. § 103(a) as being unpatentable over LILLEY in view of SMITH is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Claim 2 recites that the apparatus of claim 1 further comprises a sensor determining whether any variable sized mail holding container is properly positioned within the bucket assembly. Neither LILLEY nor SMITH disclose or suggest this feature.

On page 3 of the Final Office Action, the Examiner cites col. 5, lines 7-9 as disclosing “a positioning sensor .. minimizing damage to packages or other mail objects”. This assertion is without merit. The cited language merely discloses the following:

cylinders may be interrupted by the operator through the control unit, i.e., by operator controlled switches. If uninterrupted, flow to the container cylinders continues until a limit switch 9 (not shown) is tripped when the container is rotated

Appellants submit that the limit switch of LILLEY is not a sensor which determines whether any variable sized mail holding container is properly positioned within the bucket assembly. Nor has the Examiner demonstrated otherwise. Appellants also submit that dependent claim 2 is allowable at least for the reason that this claim depends from allowable claim 1.

Because the combination of the above-noted documents fails to disclose, or

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even suggest, at least the above-noted features of the instant invention, Appellants submit that no proper combination of these documents renders unpatentable the combination of features recited in at least dependent claim 2.

**REJECTION OF DEPENDENT CLAIM 3 UNDER 35 U.S.C. § 103 IS IN ERROR**

The rejection of claim 3 under 35 U.S.C. § 103(a) as being unpatentable over LILLEY in view of SMITH is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Claim 3 recites that the intermediate tilt position and the full tilt position minimize damage to the packages or other mail objects. Neither LILLEY nor SMITH disclose or suggest this feature.

Again, on page 3 of the Final Office Action, the Examiner cites col. 5, lines 7-9 as allegedly disclosing this feature. However, as explained above, the cited language merely discloses the following:

cylinders may be interrupted by the operator through the control unit, i.e., by operator controlled switches. If uninterrupted, flow to the container cylinders continues until a limit switch 9 (not shown) is tripped when the container is rotated

Appellants submit that the limit switch of LILLEY is not utilized to minimize damage to the packages or other mail objects. Nor has the Examiner demonstrated otherwise. Appellants also submit that dependent claim 3 is allowable at least for the reason that this claim depends from allowable claim 1.

Because the combination of the above-noted documents fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellants

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submit that no proper combination of these documents renders unpatentable the combination of features recited in at least dependent claim 3.

**REJECTION OF DEPENDENT CLAIM 6 UNDER 35 U.S.C. § 103 IS IN ERROR**

The rejection of claim 6 under 35 U.S.C. § 103(a) as being unpatentable over LILLEY in view of SMITH is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Claim 6 recites that the apparatus further comprises at least an additional sensor to detect other positions of the bucket assembly for providing signal controls to at least control movement of the bucket assembly. Neither LILLEY nor SMITH disclose or suggest this feature.

Again, on page 3 of the Final Office Action, the Examiner cites col. 5, lines 7-9 as allegedly disclosing this feature. However, as explained above, the cited language merely discloses the following:

cylinders may be interrupted by the operator through the control unit, i.e., by operator controlled switches. If uninterrupted, flow to the container cylinders continues until a limit switch 9 (not shown) is tripped when the container is rotated.

Appellants submit that the limit switch of LILLEY cannot properly be characterized as at least an additional sensor to detect other positions of the bucket assembly for providing signal controls to at least control movement of the bucket assembly. Nor has the Examiner demonstrated otherwise. Appellants also submit that dependent claim 6 is allowable at least for the reason that this claim depends from allowable claim 1.



Because the combination of the above-noted documents fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellants submit that no proper combination of these documents renders unpatentable the combination of features recited in at least dependent claim 6.

**REJECTION OF DEPENDENT CLAIM 8 UNDER 35 U.S.C. § 103 IS IN ERROR**

The rejection of claim 8 under 35 U.S.C. § 103(a) as being unpatentable over LILLEY in view of SMITH is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Claim 8 recites that the apparatus further comprises a chute sensor which detects package or mail object backlog within the chute upstream from the bucket assembly. Neither LILLEY nor SMITH disclose or suggest this feature.

On page 3 of the Final Office Action, the Examiner cites col. 5, lines 7-9 as allegedly disclosing this feature. However, as explained above, the cited language merely discloses the following:

cylinders may be interrupted by the operator through the control unit, i.e., by operator controlled switches. If uninterrupted, flow to the container cylinders continues until a limit switch 9 (not shown) is tripped when the container is rotated

Appellants submit that the limit switch of LILLEY cannot properly be characterized as a chute sensor which detects package or mail object backlog within the chute upstream from the bucket assembly. Neither LILLEY nor SMITH disclose or suggest this feature. Nor has the Examiner demonstrated otherwise. Appellants also submit that dependent claim 8 is allowable at least for the reason that this claim

depends from allowable claim 1.

Because the combination of the above-noted documents fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellants submit that no proper combination of these documents renders unpatentable the combination of features recited in at least dependent claim 8.

**REJECTION OF DEPENDENT CLAIM 13 UNDER 35 U.S.C. § 103 IS IN ERROR**

The rejection of claim 13 under 35 U.S.C. § 103(a) as being unpatentable over LILLEY in view of SMITH is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Claim 13 recites that the actuator system includes a linkage system which assists in the titling and other movements of the bucket assembly. Neither LILLEY nor SMITH disclose or suggest this feature.

On page 4 of the Final Office Action, the Examiner cites reference numeral 4 as allegedly disclosing the recited linkage system. However, col. 3, lines 6-7 of LILLEY describes reference numeral 4 as a pivot frame. The Examiner has failed to explain how such a pivot frame can be properly characterized as a linkage system of the actuator system which assists in the titling and other movements of the bucket assembly. Appellants also submit that dependent claim 13 is allowable at least for the reason that this claim depends from allowable claim 1.

Because the combination of the above-noted documents fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellants submit that no proper combination of these documents renders unpatentable the

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combination of features recited in at least dependent claim 13.

**REJECTION OF DEPENDENT CLAIM 14 UNDER 35 U.S.C. § 103 IS IN ERROR**

The rejection of claim 14 under 35 U.S.C. § 103(a) as being unpatentable over LILLEY in view of SMITH is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Claim 14 recites that the bucket assembly includes a floor assembly and a rear wall assembly for supporting any variable sized containers, the rear wall assembly including a substantially coplanar surface, where one surface of the coplanar surface is raised with respect to another surface of the coplanar surface. Neither LILLEY nor SMITH disclose or suggest this feature.

On page 4 of the Final Office Action, the Examiner cites reference numerals 3 and 4 as allegedly disclosing the recited rear wall assembly. However, col. 3, lines 6-8 of LILLEY describes reference numeral 4 as a pivot frame and reference numeral 3 as the container. The Examiner has failed to explain how such a pivot frame and container can be properly characterized as a rear wall assembly for supporting any variable sized containers, the rear wall assembly including a substantially coplanar surface, where one surface of the coplanar surface is raised with respect to another surface of the coplanar surface. Appellants also submit that dependent claim 14 is allowable at least for the reason that this claim depends from allowable claim 1.

Because the combination of the above-noted documents fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellants submit that no proper combination of these documents renders unpatentable the

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combination of features recited in at least dependent claim 14.

**REJECTION OF DEPENDENT CLAIM 15 UNDER 35 U.S.C. § 103 IS IN ERROR**

The rejection of claim 15 under 35 U.S.C. § 103(a) as being unpatentable over LILLEY in view of SMITH is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Claim 15 recites that the raised coplanar surface of claim 14 permits packages to be introduced into a half sized container while minimizing false trips of at least one of the at least one sensors. Neither LILLEY nor SMITH disclose or suggest this feature.

On page 4 of the Final Office Action, the Examiner again cites reference numerals 3 and 4 of LILLEY as allegedly disclosing the recited raised coplanar surface. However, col. 3, lines 6-8 of LILLEY merely describes reference numeral 4 as a pivot frame and reference numeral 3 as the container.

The Examiner has failed to explain how such a pivot frame and container can be properly characterized as the raised coplanar surface of claim 14 which permits packages to be introduced into a half sized container while minimizing false trips of at least one of the at least one sensors. Appellants also submit that dependent claim 15 is allowable at least for the reason that this claim depends from allowable claim 1.

Because the combination of the above-noted documents fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellants submit that no proper combination of these documents renders unpatentable the combination of features recited in at least dependent claim 15.

**REJECTION OF DEPENDENT CLAIM 16 UNDER 35 U.S.C. § 103 IS IN ERROR**

The rejection of claim 16 under 35 U.S.C. § 103(a) as being unpatentable over LILLEY in view of SMITH is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Claim 16 recites that the feedback control system is a positional feedback system associated with the actuator assembly for controlling the movement of the bucket assembly. Neither LILLEY nor SMITH disclose or suggest this feature.

On page 4 of the Final Office Action, the Examiner again cites reference numeral 12 as allegedly disclosing the recited positional feedback system. However, col. 3, lines 35-39 of LILLEY merely describes reference numeral 12 as “a hydraulic control unit”. The Examiner has failed to explain how a hydraulic control unit can be properly characterized as the recited positional feedback system associated with the actuator assembly for controlling the movement of the bucket assembly. Appellants also submit that dependent claim 16 is allowable at least for the reason that this claim depends from allowable claim 1.

Because the combination of the above-noted documents fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellants submit that no proper combination of these documents renders unpatentable the combination of features recited in at least dependent claim 16.

**REJECTION OF DEPENDENT CLAIM 18 UNDER 35 U.S.C. § 103 IS IN ERROR**

The rejection of claim 18 under 35 U.S.C. § 103(a) as being unpatentable over LILLEY in view of SMITH is in error, the decision of the Examiner to reject this claim

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should be reversed, and the application should be remanded to the Examiner.

Claim 18 recites that the loading system further comprises a sensor determining whether the container is properly positioned within the bucket assembly, a safety sensor associated with the actuator system ensuring shut down of the actuator system based on a detected problem, at least an additional sensor to detect at least one of an upright and down position of the bucket assembly, and a chute sensor located proximate to the chute which detects package backlog on the chute. Neither LILLEY nor SMITH disclose or suggest these features.

On page 5 of the Final Office Action, the Examiner cites col. 5, lines 7-9 and reference numerals 28 and 29 as allegedly disclosing the recited safety sensor, the recited additional sensor and the recited chute sensor. However, as explained above, the cited language of col. 5, lines 7-9 merely discloses the following:

cylinders may be interrupted by the operator through the control unit, i.e., by operator controlled switches. If uninterrupted, flow to the container cylinders continues until a limit switch 9 (not shown) is tripped when the container is rotated

Furthermore, col. 3, lines 63-65 of LILLEY merely describes sensors 28 and 29 as sensors which function to disable "power to the system when an operator or equipment are in the area of the loading end of the container.

The Examiner has failed to explain how such sensors can be properly characterized as a sensor determining whether the container is properly positioned within the bucket assembly, a safety sensor associated with the actuator system ensuring shut down of the actuator system based on a detected problem, at least an

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additional sensor to detect at least one of an upright and down position of the bucket assembly, and a chute sensor located proximate to the chute which detects package backlog on the chute. Appellants also submit that dependent claim 18 is allowable at least for the reason that this claim depends from allowable claim 17.

Because the combination of the above-noted documents fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellants submit that no proper combination of these documents renders unpatentable the combination of features recited in at least dependent claim 18.

**REJECTION OF DEPENDENT CLAIM 19 UNDER 35 U.S.C. § 103 IS IN ERROR**

The rejection of claim 19 under 35 U.S.C. § 103(a) as being unpatentable over LILLEY in view of SMITH is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Claim 19 recites that the feedback control system is a positional system associated with the actuator system. Neither LILLEY nor SMITH disclose or suggest this feature.

On page 5 of the Final Office Action, the Examiner again cites col. 5, lines 7-9 as allegedly disclosing the recited positional feedback system. However, as explained above, the cited language of col. 5, lines 7-9 merely discloses the following:

cylinders may be interrupted by the operator through the control unit, i.e., by operator controlled switches. If uninterrupted, flow to the container cylinders continues until a limit switch 9 (not shown) is tripped when the container is rotated

Appellants submit that the limit switch of LILLEY cannot properly be

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characterized as the recited feedback control system is a positional system associated with the actuator system. Nor has the Examiner demonstrated otherwise. Appellants also submit that dependent claim 19 is allowable at least for the reason that this claim depends from allowable claim 17.

Because the combination of the above-noted documents fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellants submit that no proper combination of these documents renders unpatentable the combination of features recited in at least dependent claim 19.

**REJECTION OF DEPENDENT CLAIM 20 UNDER 35 U.S.C. § 103 IS IN ERROR**

The rejection of claim 20 under 35 U.S.C. § 103(a) as being unpatentable over LILLEY in view of SMITH is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Claim 20 recites that the feedback control system includes position sensors providing feedback signals to a controller for indexing the movement of the bucket assembly. Neither LILLEY nor SMITH disclose or suggest this feature.

On page 5 of the Final Office Action, the Examiner again cites col. 5, lines 7-9 as allegedly disclosing the recited position sensors. However, as explained above, the cited language of col. 5, lines 7-9 merely discloses the following:

cylinders may be interrupted by the operator through the control unit, i.e., by operator controlled switches. If uninterrupted, flow to the container cylinders continues until a limit switch 9 (not shown) is tripped when the container is rotated

Appellants submit that the limit switch of LILLEY cannot properly be



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characterized as the recited feedback control system includes position sensors providing feedback signals to a controller for indexing the movement of the bucket assembly. Nor has the Examiner demonstrated otherwise. Appellants also submit that dependent claim 20 is allowable at least for the reason that this claim depends from allowable claim 17.

Because the combination of the above-noted documents fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellants submit that no proper combination of these documents renders unpatentable the combination of features recited in at least dependent claim 20.

**REJECTION OF DEPENDENT CLAIM 22 UNDER 35 U.S.C. § 103 IS IN ERROR**

The rejection of claim 22 under 35 U.S.C. § 103(a) as being unpatentable over LILLEY in view of SMITH is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Claim 22 recites that the method of claim 21 further comprises the steps of detecting when the container has reached full capacity in the upright position and removing the container. Neither LILLEY nor SMITH disclose or suggest this feature.

On page 5 of the Final Office Action, the Examiner again cites col. 3, lines 35-56 of SMITH as allegedly disclosing “detecting when a bucket assembly is full.” However, as explained above, the sensor 40 in SMITH merely “responds when the bin 28 is filled to a level which will completely fill one box.” See col. 3, lines 52-54. The disclosed sensor 40 simply does not, among other things, detect when the bucket assembly has reached a fill capacity in the upright position. Nor does SMITH disclose or suggest that

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the bin 28 is removed so as to disclose or suggest the removing of the container. The Examiner has not demonstrated otherwise. Appellants also submit that dependent claim 22 is allowable at least for the reason that this claim depends from allowable claim 21.

Because the combination of the above-noted documents fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellants submit that no proper combination of these documents renders unpatentable the combination of features recited in at least dependent claim 22.

**REJECTION OF DEPENDENT CLAIM 23 UNDER 35 U.S.C. § 103 IS IN ERROR**

The rejection of claim 23 under 35 U.S.C. § 103(a) as being unpatentable over LILLEY in view of SMITH is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Claim 23 recites that the method of claim 21 further comprises the step of detecting whether the container is properly positioned prior to loading the container with the content. Neither LILLEY nor SMITH disclose or suggest this feature.

On page 6 of the Final Office Action, the Examiner cites col. 5, lines 12-21 of LILLEY as allegedly disclosing "detecting bucket assembly proper positioning." Appellants disagree that the cited language of LILLEY discloses the feature recited in claim 23. The cited language merely discloses the following:

Once the container reaches the horizontal position, flow to the dump cylinders 9, 10 is established by diversion of fluid from the four-way valve 80 through line 90 to the four-way valve 81. The four-way valve 81 supplies hydraulic fluid to the dump cylinders 9, 10 through a dual counterbalance 87 and high pressure line 89 to cause rotation about the

pivot point 5. Again, the dual counterbalance provides sufficient back pressure in the supply 89 and return 91 lines for holding and releasing pressure. Flow to the dump cylinders 9, 10 may be interrupted by the operator to control the degree of rotation of the container.

Appellants disagree that the above-noted language discloses or suggests the step of detecting whether the container is properly positioned prior to loading the container.

Because the combination of the above-noted documents fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellants submit that no proper combination of these documents renders unpatentable the combination of features recited in at least dependent claim 23.

**REJECTION OF DEPENDENT CLAIM 24 UNDER 35 U.S.C. § 103 IS IN ERROR**

The rejection of claim 24 under 35 U.S.C. § 103(a) as being unpatentable over LILLEY in view of SMITH is in error, the decision of the Examiner to reject this claim should be reversed, and the application should be remanded to the Examiner.

Claim 24 recites that the method of claim 21 further comprises the step of detecting any problems and stopping the loading of the container. Neither LILLEY nor SMITH disclose or suggest this feature.

On page 6 of the Final Office Action, the Examiner cites col. 5, lines 12-21 of LILLEY as allegedly disclosing "detecting problems and stopping."

Appellants disagree that the cited language of LILLEY discloses the feature recited in claim 24. Again, the cited language merely discloses the following:

Once the container reaches the horizontal position, flow to the dump cylinders 9, 10 is established by diversion of fluid from the four-way valve

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80 through line 90 to the four-way valve 81. The four-way valve 81 supplies hydraulic fluid to the dump cylinders 9, 10 through a dual counterbalance 87 and high pressure line 89 to cause rotation about the pivot point 5. Again, the dual counterbalance provides sufficient back pressure in the supply 89 and return 91 lines for holding and releasing pressure. Flow to the dump cylinders 9, 10 may be interrupted by the operator to control the degree of rotation of the container.

Appellants disagree that the above-noted language discloses or suggests the step of detecting any problems and stopping the loading of the container. Furthermore, col. 3, lines 63-65 of LILLEY merely describes sensors 28 and 29 as sensors which function to disable "power to the system when an operator or equipment are in the area of the loading end of the container. Such sensors are not disclosed as being capable of detecting any problems and stopping the loading of the container and the Examiner has not demonstrated otherwise.

Because the combination of the above-noted documents fails to disclose, or even suggest, at least the above-noted features of the instant invention, Appellants submit that no proper combination of these documents renders unpatentable the combination of features recited in at least dependent claim 24.

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**(X) CONCLUSION**

Each of claims 1-26 are patentable under 35 U.S.C. § 112, 102(b) and 103(a). Specifically, the applied art of record, even if properly combined, fails to disclose or suggest the unique combination of features recited in Appellants' claims 1-26. Accordingly, Appellants respectfully request that the Board reverse the decision of the Examiner to reject claims 1-26 under 35 U.S.C. §103(a), and remand the application to the Examiner for withdrawal of the above-noted rejections.

Respectfully submitted,  
W. BLACKWELL, *et al.*

A handwritten signature in black ink, appearing to read 'Andrew M. Calderon', written over a horizontal dashed line.

Andrew M. Calderon  
Reg. No. 38,093

March 1, 2006  
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**Attachments:**

Claims Appendix  
Evidence Appendix  
Related Proceedings Appendix

CLAIMS ON APPEAL

1. An apparatus for loading mail objects, comprising:

a bucket assembly which holds a container;

an actuator system moving the bucket assembly between at least an upright position, an intermediate tilt position and a full tilt position;

at least one sensor which detects whether the bucket assembly has reached a fill capacity at each of the upright position, the intermediate tilt position and the full tilt position; and

a feedback control system which controls an indexing of the bucket assembly, via the actuator system, between the upright position, the intermediate tilt position and the full tilt position,

wherein in the intermediate position, packages or other mail objects are permitted to settle within the bucket assembly such that additional packages or other mail objects can be introduced into the bucket assembly in the intermediate position.

2. The apparatus of claim 1, further comprising a sensor determining whether any variable sized mail holding container is properly positioned within the bucket assembly.

3. The apparatus of claim 1, wherein the intermediate tilt position and the full tilt position minimize damage to the packages or other mail objects.

4. The apparatus of claim 1, wherein the bucket assembly includes an open sided configuration for accommodating variable sized mail containers.

5. The apparatus of claim 1, further comprising a safety sensor associated with the actuator assembly to ensure shut down of the actuator assembly based on a detected problem.

6. The apparatus of claim 1, further comprising at least an additional sensor to detect other positions of the bucket assembly for providing signal controls to at least control movement of the bucket assembly.

7. The apparatus of claim 6, wherein the other positions is at least one of an upright and down position.

8. The apparatus of claim 1, further comprising a chute sensor which detects package or mail object backlog within the chute upstream from the bucket assembly.

9. The apparatus of claim 1, further comprising a cradle assembly which holds the bucket assembly, the cradle assembly being coupled to the actuator system.

10. The apparatus of claim 9, wherein the cradle assembly includes a cradle

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shaft coupled to a mounting system of a frame assembly.

11. The apparatus of claim 9, wherein the cradle assembly further includes lift ribs coupled to a mount assembly of the actuator system.

12. The apparatus of claim 1, wherein the actuator system is one of a hydraulic system, air cylinder and screw-type system.

13. The apparatus of claim 1, wherein the actuator system includes a linkage system which assists in the tilting and other movements of the bucket assembly.

14. The apparatus of claim 1, wherein the bucket assembly includes a floor assembly and a rear wall assembly for supporting any variable sized containers, the rear wall assembly including a substantially coplanar surface, where one surface of the coplanar surface is raised with respect to another surface of the coplanar surface.

15. The apparatus of claim 14, wherein the raised coplanar surface permits packages to be introduced into a half sized container while minimizing false trips of at least one of the at least one sensors.

16. The apparatus of claim 1, wherein the feedback control system is a positional feedback system associated with the actuator assembly for controlling the movement of the bucket assembly.



17. A loading system, comprising:

a transporting and sorting system, including:

an induction mechanism that introduces packages onto a transporting system which transports the packages from the induction mechanism to a plurality of drop off positions;

a chute associated with each of the plurality of drop off positions; and

a loading apparatus, comprising:

a bucket assembly which holds a container; an actuator system moving the bucket assembly between at least an upright position, an intermediate tilt position and another tilt position;

at least one sensor which detects whether the bucket assembly has reached a fill capacity at each of the upright position, the intermediate tilt position and the another tilt position; and

a feedback control system which controls an indexing of the bucket assembly, via the actuator system, between the upright position, the intermediate tilt position and the another tilt position.

18. The loading system of claim 17, further comprising:

a sensor determining whether the container is properly positioned within the bucket assembly;

a safety sensor associated with the actuator system ensuring shut down of the

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actuator system based on a detected problem;

at least an additional sensor to detect at least one of an upright and down position of the bucket assembly; and

a chute sensor located proximate to the chute which detects package backlog on the chute.

19. The loading apparatus of claim 17, wherein the feedback control system is a positional system associated with the actuator system.

20. The loading apparatus of claim 17, wherein the feedback control system includes position sensors providing feedback signals to a controller for indexing the movement of the bucket assembly.

21. A method for loading packages, comprising the steps of:  
placing a container in a first tilt position;  
detecting when the container is full at the first tilt position;  
indexing the container to an intermediate tilt position to enable settling of contents within the container;  
detecting when the container is full at the intermediate tilt position; and  
indexing the container to an upright position.

22. The method of claim 21, further comprising the steps of detecting when the

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container has reached full capacity in the upright position and removing the container.

23. The method of claim 21, further comprising the step of detecting whether the container is properly positioned prior to loading the container with the content.

24. The method of claim 21, further comprising the step of detecting any problems and stopping the loading of the container.

25. A control system for loading packages, comprising:  
a module which detects when a container is full at a first tilt position, an intermediate tilt position and an upright position;  
a module which detects a position of the container; and  
a module which controls a movement of the container based at least on a capacity of the container.

26. The control of claim 25, wherein the controlling module is a positional sensor.

EVIDENCE APPENDIX

This section lists evidence submitted pursuant to 35 U.S.C. §§1.130, 1.131, or 1.132, or any other evidence entered by the Examiner and relied upon by Appellant in this appeal, and provides for each piece of evidence a brief statement setting forth where in the record that evidence was entered by the Examiner. Copies of each piece of evidence are provided as required by 35 U.S.C. §41.37(c)(ix).

| NO. | EVIDENCE | BRIEF STATEMENT SETTING FORTH<br>WHERE IN THE RECORD THE<br>EVIDENCE WAS ENTERED BY THE<br>EXAMINER |
|-----|----------|-----------------------------------------------------------------------------------------------------|
| 1   | N/A      | N/A                                                                                                 |

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RELATED PROCEEDINGS APPENDIX

Pursuant to 35 U.S.C. §41.37(c)(x), copies of the following decisions rendered by a court of the Board in any proceeding identified above under 35 U.S.C. §41.37(c)(1)(ii) are enclosed herewith.

| NO. | TYPE OF PROCEEDING | REFERENCE NO. | DATE |
|-----|--------------------|---------------|------|
| 1   | N/A                | N/A           | N/A  |